Progress in Surface Science

An International Review Journal

EDITOR: Professor Sydney G. Davison

AUTHOR AND SUBJECT INDEX

Volume 46, 1994

PERGAMON

Progress in Surface Science

EDITOR-IN-CHIEF:
PROF. SYDNEY G. DAVISON

MANAGING EDITOR:
PRUDENCE G. DAVISON

EDITORIAL OFFICE
Applied Mathematics Department
University of Waterloo
Waterloo, Ontario
Canada N2L 3G1

Tel: **(519) 885-1211 (ext. 3161)**
Fax: **(519) 746-6530**
e-mail: **pdavison@jeeves.uwaterloo.ca**

ADVISORY BOARD

I. BARTOŠ
Academy of Sciences
Prague, Czech Republic

B.E. CONWAY
University of Ottawa
Ontario, Canada

A.S.G. CURTIS
University of Glasgow
Scotland

A.W. CZANDERNA
NREL Golden,
Colorado, U.S.A.

J.G. DILLARD
Virginia Polytechnic Institute
and State University
Blacksburg, Virginia, U.S.A.

D.D. ELEY
University of Nottingham
England

P.J. ESTRUP
Brown University, Providence,
Rhode Island, U.S.A.

V.E. HENRICH
Yale University, New Haven,
Connecticut, U.S.A.

S. KONO
Tohoku University
Aobaku, Japan

J. KOUTECKY
Freie Universität
Berlin, Germany

R.M. LATANSION
MIT, Cambridge,
Massachusetts, U.S.A.

J.D. LEVINE
Flat Display Products
Dallas, Texas, U.S.A.

A.A. MARADUDIN
University of California
Irvine, California, U.S.A.

A.G. NAUMOVETS
Academy of Sciences
Kiev, Ukraine

J.B. PENDRY
Imperial College
London, England

S.T. PICRAUX
Sandia National Laboratory
Albuquerque, New Mexico, U.S.A

T.N. RHODIN
Cornell University
Ithaca, New York, U.S.A.

M. STĘŚLICKA
University of Wrocław
Poland

H. TI TIEN
Michigan State University
East Lansing, Michigan, U.S.A.

H. UEBA
Toyama University
Japan

L. WEISS
Roswell Park Memorial Institute
Buffalo, New York, U.S.A.

R.F. WILLIS
Pennsylvania State University
University Park, Pennsylvania, U.S.A.

K. ZHANG
Fudan University, Shanghai,
People's Republic of China

Production Editor: Douglas Cherno, E-mail: D.CHERNO@ELSEVIER.COM.

Publishing, Subscription and Advertising Offices: Elsevier Science Inc., 660 White Plains Road, Tarrytown, New York 10591-5153, U.S.A., E-mail Address: ESUK.USA@ELSEVIER.COM; and Elsevier Science Ltd, The Boulevard, Langford Lane, Oxford, OX5 1GB, England.

Published Monthly. *Annual Institutional Subscription Rates* (1995): North, Central and South America, U.S.$708.00, Rest of World £475.00. Sterling prices exclude VAT. Non-VAT registered customers in the European Community will be charged the appropriate VAT in addition to the price listed. Prices include postage and insurance and are subject to change without notice.

List of Contents, Volume 46, 1994

Surface and Interface Stress Effects in Thin Films 1
by R.C. CAMMARATA

Imaging of Living Cells by Atomic Force Microscopy 39
by E. HENDERSON

Kinetics of Permeation and Gating in Membrane Channels 61
by M.E. STARZAK

PROCEEDINGS OF THE SIXTH SYMPOSIUM ON SURFACE PHYSICS, Chlum Castle, Czech Republic, May 24–28, 1993 105

1. Electronic Structure
2. Crystal Structure

Self-Assembled Monolayers at Electrode Metal Surfaces 335
by C. BUESS-HERMAN

Physical Foundation of Quantitative Auger Analysis 377
by S MRÓZ

PROGRESS IN SURFACE SCIENCE, VOLUME 46

AUTHOR INDEX

Aarts, J. 273
Aberdam, D. 437
Abraham, F.F. 374
Abstreiter, G. 293
Achèche, M. 199
Ackland, G.J. 35
Adams, D.J. 95
Adams, D.L. 304, 319
Ade, H. 132
Adrain, M. 58, 59
Afanasev, B.N. 374
Agulló-Rueda, F. 230
Ahmed, M.E. 372
Ahmed, Z.A. 372
Akamatsu, B. 437
Akamine, S. 56
Akerfeldt, K.S. 98
Akhmetov, N.K. 371, 372
Alberts, M.R. 318
Albrecht, T.R. 55, 56, 59
Albridge, R.G. 293
Aldén, M. 175
Aldrich, R.W. 103
Alduino, A. 56
Alexander, S. 55
Allègre, J. 218
Allibert, M. 157
Allie, G. 437
Allison, D.P. 57, 58
Almers, W. 99
Alonso, E.V. 148
Alonso, M. 292
Alpes, H. 96
Altmann, W. 186
Alvarado, S.F. 148
Alvarez, O. 95, 97
Amastopoulos, A. 373
Amer, N.M. 55
Aminpirooz, S. 304
Amoddeo, A. 318
Andersen, J.N. 304
Andersen, O.K. 175
Andersen, O.S. 96, 97, 98, 100, 102
Andersen J.N. 157
Anderson, E. 132
Anderson, O.S. 103
Anderson, V.E. 198
Andreoli, T.E. 96
Andreussi, F. 37
Andrews, D.A. 437
Anjum, S. 133
Apell, P. 148, 199
Appel, H.-J. 96
Armstrong, C. 100, 104
Armstrong, C.M. 102
Armstrong, R.D. 371, 374
Arnsdorf, M.F. 58
Ashcroft, F.M. 99
Ashley, J.C. 436
Atanasoska, L. 369
Auerbach, A. 95
Augustyniak, W.M. 35
Avery, S. 369
Avrami, M. 374

Bach, D. 97
Bachrach, R.Z. 273
Baddorf, A.P. 157
Bader, S.D. 175
Baikerikar, K.G. 370
Bain, C.D. 369
Bain, J.A. 36
Baird, R.J. 239
Baker, J.G. 372
Baker, S.P. 37
Balasubramanian, T. 100
Balberg, J. 148
Balden, M. 158
Baldereschi, A. 293
Baltzer, P. 133
Bamberg, E. 96, 103, 369
Bambert, E. 99
Bambynek, W. 435
Bander, M. 148
Banerjea, A. 36
Baragiola, R.A. 148
Baratoff, A. 273
Barbee, K.A. 56
Barbet, A. 437
Barbieri, A. 318, 319
Bard, A. 369
Bard, A.J. 370
Barnard, E.A. 99
Barnes, A.V. 293
Baroni, S. 293
Barth, J.V. 274
Bartynski, R.A. 121, 157

Baschenko, O.A. 238, 248
Basha, C.A. 373
Batchelor, D.R. 304, 437
Batra, I.P. 273
Batrakov, V.V. 370, 373
Batson, P.E. 198
Batteas, J.D. 318
Baudat, P.A. 293
Baudoing, R. 437
Baudoing-Savois, R. 318
Bauer, C.L. 36
Bauer, E.G. 132
Baumberger, M. 122
Baumgärtel, H. 373
Bausells, J. 198
Bayer, P. 319
Beamson, G. 132
Beck, R. 370
Becka, A.M. 370
Becker, L. 304, 318
Becker, R. 374
Becker, R.S. 273
Begenisich, T.B. 99
Behm, R.J. 274, 318, 373
Benesh, G.A. 175
Benndorf, K. 104
Benson, G.C. 35
Benz, R. 103
Benzanilla, F. 103
Berens, J.P.H. 101
Berg, J.M. 97
Berger, H. 292
Bergström, S.A.L. 239
Berndt, H. 436
Bertilsson, L. 369
Bertozzi, C.R. 370
Berzins, T. 374
Besenbacher, F. 318
Bethe, H. 435
Bethe, H.A. 435
Betova, I. 374
Betz, G. 436
Betz, H. 98, 99
Beyer, E.C. 99
Beyreuther, K. 99
Bezanilla, F. 100, 102, 103
Bezanilla, M. 58, 59
Biebuyck, H.A. 369
Binnig, G. 55, 56, 60
Bishop, H.E. 437
Blake, R. 121
Blanc, E. 437
Blatz, A.L. 103
Blout, E.R. 96, 97
Bludau, H. 304, 318
Bobbin, S.E. 37
Boersch, H. 199
Boettger, J.C. 157
Bøgh, E. 304
Boheim, G. 100
Bohr, J. 273
Bondot, P. 436
Bondybey, V.W. 157
Bonham, R.A. 435
Bonzel, H.P. 304
Boom, R. 293
Borg, A. 133
Borstel, G. 121, 122
Bosco, E. 374
Bose, S.K. 175
Bosio, C. 293
Bostanov, V. 373, 374
Bothe, F. 318, 319
Bottomley, L.A. 57
Bozhinov, M. 374
Brabec, V. 372
Bradshaw, A.M. 304, 318
Branica, M. 372
Braslau, N. 293
Brau, C.A. 293
Braun, J. 122
Braun, J.G. 121
Braun, W. 133, 435
Brennan, S. 36, 318
Bretag, A.H. 103
Brickmann, J. 101
Briggs, D. 133
Bright, T.B. 369
Brillson, L.J. 292
Bringans, R.D. 273
Brock, W. 103
Brodskii, A.M. 373
Brookes, N.B. 148
Brooks, H. 34
Brown, G.M. 58
Brown, R.G. 121
Browning, R. 133
Bruening, M. 369
Bruggerman, D.A.G. 198
Bruhwiler, P.A. 157, 304
Brum, J.A. 230
Bryant, P.J. 57
Budevski, E. 374
Buess-Herman, C. 370, 371, 372, 373, 374, 375
Bull, F.G. 103
Bunding Lee, K.A. 370
Bunshah, R.F. 37
Burchardt, J. 319
Burchhardt, J. 304
Burge, R.E. 133
Burhop, E.H.S. 435
Burri, G. 293
Burt, D.R. 99
Bussig, T.D. 437
Bustamante, C. 56, 57, 58, 59
Bustamante, C.J. 58
Butler, W.H. 121, 122

Butt, H.-J. 60
Butt, H.J. 56, 59, 369

Cahn, J.W. 34, 35, 36
Calahan, M.D. 99
Calogero, F. 239
Calogero, G. 122
Cammarata, R.C. 35, 36, 37
Campagna, M. 148
Campbell, C.T. 304, 318
Canac, F. 374
Cannell, D.S. 55
Cantor, C.R. 59
Cao, Jianming 437
Capasso, C. 292, 293
Capehart, T.W. 186
Caporale, L.H. 97
Capozi, M. 292
Caputi, L.S. 318
Carbone, C. 148
Cardona, M. 293
Carlsson, G. 133
Carluccio, R. 293
Carmichael, V.E. 98
Carver, T.E. 56
Caspar, D.L.D. 99
Catlin, A. 36
Catterall, W.A. 96, 98, 104
Cecchi, X. 95
Cerrina, F. 133, 292, 293
Chadi, D.J. 218
Chaiyasith, P. 373
Chambers, S.A. 437
Chandavarkar, S. 304, 318
Chandler, W.K. 96
Chandrasekaran, R. 96
Chang, C.C. 434, 437
Chang, L. 56, 57
Chang, L.L. 230
Chang, S.C. 369
Changeux, J.P. 98, 99
Chatenay, D. 57
Chatillon, C. 157
Chaudavarkar, S. 318
Chaudhuri-Ray, A.K. 293
Chemouilli, P. 98, 99
Chen, B.L. 437
Chen, C.T. 122
Chen, M.H. 435
Chen, N. 148
Chen, Y. 103, 158
Cherepin, V.T. 437
Chevalet, J. 371
Chiang , T.-C. 273, 292

Chidsey, C.E.D. 369, 370
Chin, S. 101
Chiu, S.W. 100
Cho, H,-S. 223
Chornik, B. 437
Chou, M.Y. 38
Chou, Y. 157
Christensen, B.F.J. 97
Christensen, N.E. 175, 293
Christian, S.D. 372
Christmann, K. 318
Chulkov, E.V. 157
Chun-Fei-Li 436
Chung, B.D. 369
Chung, C. 370
Chung, L.A. 98
Chyung, L.J. 36
Ciani, S. 99
Ciftan, M. 121
Cifu, A.S. 97
Cimino, R. 292
Ciotti, M.T. 133
Ciotti, Theresa M. 292
Ciraci, S. 273
Clark, D.T. 133
Clarke, A. 148
Clemens, B.M. 36
Clementi, E. 101
Cleveland, J.P. 60
Coates, D.G. 437
Coffman, C.R. 56
Cohen, M.L. 157
Cohen-Boulakia, J. 369
Cohn, Z.A. 99
Cole, K.S. 94, 100
Cole, R.K. 292, 293
Coleman, J.J. 293
Collieux, C. 198, 199
Collins, I.R. 304, 318
Collinson, M. 370
Colquhoun, D. 100
Colson, J.P. 36
Coluzza, C. 292, 293
Comacho, L. 371
Conti, F. 98, 104
Cook, J.C. 97
Cook, P. 96
Cooper, K. 102
Coronado, R. 95
Couchman, P.R. 370
Coulman, D.J. 318
Cowley, J.M. 198
Cox, M. 436
Coxon, P. 133
Crampin, S. 175
Crasemann, B. 435
Creager, S.E. 370
Crooks, R.M. 369
Cross, T.A. 97
Crouzy, S. 102
Cuender, P. 369
Cunningham, S.L. 175
Curtis, H.J. 94

Czerny, C.P. 56, 59

D'Addato, S. 318
Daikhin, L.I. 373
Damaskin, B.B. 370, 371, 372, 373, 374
Dambly, L. 199
Daniels, B.J. 37
Daniels, R.R. 292
Darlison, M.G. 99
Dasannacharya, B.A. 158
Dauth, B.H. 148
Davenport, A. 373
Davidson, C.R. 370
Davies, A.G. 218
Davies, P.F. 56
Davies, S.F. 133
Davis, B.R. 103
Davis, H.L. 157
Davis, L.E. 434, 435, 436
Davis G.T. 36
Davison, S.G. 230
Daw, M. 35
Daw, M.S. 318
De, G.B. 59, 60
de Andres, P. 318
de Andres, P.L. 319
De Boer, F.R. 293
de Grooth, B.G. 56, 59
de Levie, R. 370, 371, 372, 373, 374
De Stasio, G. 292
De Stasio, Gelsomina 292
DeGrado, W.F. 97, 98
Deinhammer, R.S. 369
Delahay, P. 374
Delaine, C. 57
Demota, K. 369
Dench, W.A. 435
Deputy, D. 56
Dericke, I. 273
DeRose, J.A. 57, 374
Descouts, P. 58, 59
DeStasio, G. 133
Devaud, G. 59
DeVillers-Thiery, A. 98, 99
Diaz, A. 370
Diehl, H.W. 148
Diehl, R.D. 304, 318
Dimitrov, N. 373
Dittrich, J. 371
Dixon, N.B. 59
Djafari-Rouhani, B. 230
Dobrzynski, L. 230
Dodson, B.W. 37
Doern, F.E. 437
Doerner, M.F. 37
Doghmane, N. 435
Doliński, W. 435, 436
Döll, R. 319
Donath, M. 186
Döring, W. 374
Dose, V. 122, 186
Douglas, K. 59
Dow, J.D. 218
Downing, K.H. 56
Doyen, G. 273, 274
Draber, S. 99
Drake, B. 55, 57, 59
Drakova, D. 273, 274
Drchal, V. 175
Dregia, S.A. 36
Drube, W. 274
Dryhurst, G. 372
du Plessis, J. 437
Dubois, L.H. 369
Dufayard, P. 437
Dunaway, D.J. 369
Dunning, F.B. 148
Dunphy, J. 318
Dupuy, C. 293
Durán, J.C. 293
Durham, P.G. 122
Durkin, J.T. 97, 100
Dürr, H. 122
Durrell, S.R. 97, 104
Dutton, P.J. 98
Dyatkina, S.L. 370, 371

Eastman, D.E. 292
Eaves, L. 218
Ebel, H. 239, 248
Ebel, M.F. 239, 248
Eberle, K. 60
Eby, R.K. 36
Echenique, P.M. 186, 198, 199
Eckl, G. 148
Edinger, K. 369
Edmonds, D.T. 104
Edwards, G.S. 293
Eesley, G.L. 186
Egelhoff, W.F. 437
Egger, M. 59
Eguiluz, A.G. 158
Ehrenfest. P. 274
Eichner, S. 148
Eilers, J.E. 369
Einstein, T.L. 318
Eisenberg, R. 102
Eisenhut, B. 186
Eisenmann, G. 99, 102
Eisenriegler, E. 148
Eizenberg, M. 293
El Boudouti, E.-H. 230
El Khalifi, J. 218
Elings, V. 57, 59
Elings, V.B. 56
Elving, P.J. 371, 372

Emanuel, A. 293
Emch, R. 58
Eng, L.M. 59
Engel, A. 59
Engel, W. 133
Engelhardt, R. 157
English, J.H. 157
Ennis, P.B. 99
Erhart, G. 437
Erskine, J.L. 158
Ertl, G. 133, 274, 304, 318
Ertl, K. 186
Esaki, L. 230
Eschrig, H. 175
Esselink, E. 369
Etchebest, C. 101
Evans, D.E. 369
Evans, S.D. 369
Evans, U.R. 374
Everhart, T.E. 435
Eyring, H. 100

Fadley, C.S. 239
Fahr, A. 103
Fainchtein, R. 374
Falicov, L.M. 175
Fanelli, N. 374
Fartash, A. 37
Fauster, Th. 122, 186
Feder, R. 148
Fedjk, J. 370
Fedorovich, N.V. 370, 371
Feenstra, R.M. 274
Feibelman, P.J. 157
Feidenhans'l, R. 273
Fellner-Feldegg, H. 133
Fenter, P. 318
Ferrell, T.L. 57, 58, 198
Ferris, N. 369
Fike, C.T. 374
Fink, M. 437
Finkelstein, A. 96, 102
Finklea, H.O. 369, 370
Finn, M.C. 35
Finner-Moore, J. 97
Finnis, M.W. 35, 157
Fischer, N. 186
Fischer, R. 186
Fishbarg, S.J. 103
Fisher, D. 304, 318
Fishman, H. 96, 100, 103
Fishman, H.M. 100
Fitzhugh, R. 102
Fleming, J.C. 59
Fletcher, I.W. 133
Fletcher, S. 374
Flockerzi, V. 95, 96
Flodström, S.A. 157
Flores, F. 198, 218, 293
Florez, L.T. 292
Foiles, S.M. 318
Fokkink, L.G.J. 370
Folkers, J.P. 369
Foresti, M.L. 373, 375
Fornili, S.L. 101
Forte, M. 98
Fowler, K.H. 293
Fox, M.A. 369
Franck, C. 371
Francke, W.W. 99
Francois, H. 372
Frank, K.-H. 157, 304
Franke, F. 56
Freeman, A.J. 148, 175
Freeouf, J.L. 293
Frehland, E. 102
Fricke, A. 318
Friedrich, A. 373
Friel, D.D. 99
Fries, W.H. 240
Fritsche, V. 319
Fritz, M. 56, 59
Fritzsche, V. 318, 437
Frommer, J. 57
Frost, J.E.F. 218
Frumkin, A.N. 370, 371, 373, 374
Fu, C.L. 148, 175
Fuchs, M. 103
Fujimoto, J.G. 186
Fujita, N. 99
Fukunaga, T. 218
Fullerton, E.E. 37
Funabashi, M. 318
Funutani, Y. 95
Fuoco, R. 374
Furcinitti, P.S. 59
Fürst, G. 319
Furtsch, T. 369
Furutani, Y. 95
Fyles, T.M. 98

Gädeke, W. 157
Gall, A.A. 58
Gallenson, N. 56
Gallon, T.E. 435
Galus, Z. 374
Gao, X. 373
Gao, Y. 437
Garavito, R.M. 58
Garcia-Molina, R. 198
García-Moliner, F. 218
Gardin, D. 318
Garnett, M.J.C. 198
Garry, G.A. 274
Gaspar, J.A. 158
Gates, P. 102
Gatos, H.C. 35

Gaub, H.E. 56, 57, 59, 60
Gaubert, C. 437
Gauthier, Y. 318
Gay, J.G. 148
Geiger, J. 199
Gelius, U. 133
Gerber, C. 55
Gergely, G. 436
Gibberson, R. 56
Gibbs, D. 37, 157
Gibbs, J.W. 34
Gierst, J. 371
Gierst, L. 371, 375
Giesen, K. 122, 186
Gil, B. 218
Gilula, N.B. 99
Ginatempo, B. 122
Girvin, S.M. 148
Glasser, M.L. 223, 230
Glauber, R. 103
Glencourse, T.A. 99
Godfrey, M.J. 35, 158
Golden, L.B. 435
Goldman, D. 101
Goldmann, A. 133, 186
Golovchenko, J.A. 35
Gölzhäuser, A. 369
Gonis, A. 122
Gonze, M. 371
Goodenough, D.A. 99
Gotzos, V. 60
Gould, S.A. 55, 59
Gould, S.A.C. 57, 59
Gozzo, F. 292, 293
Graβ, M. 122
Grabke, H.J. 437
Graham, R.L. 369
Grant, J.T. 435
Gras Marti, A. 198
Grätzel, M. 369
Grenningloh, I.G. 99
Gressus, C. Le 437
Greve, J. 56, 59, 60
Gries, W.H. 248, 436
Griffin, J.H. 369
Griffith, O.H. 133
Grigorev, N.B. 373
Grimsditch, M. 37
Gritsch, R. 274
Gronsky, R. 175
Grubel, G. 37
Grunthaner, F.J. 293
Grunze, M. 369
Gruzza, B. 436
Gryko, J. 239
Grysiński, M. 435
Gudat, W. 199
Guichar, G.M. 274
Guidelli, R. 370, 373, 374, 375
Gumbsch, P. 35
Gundelfinger, D.E. 99
Guntherodt, H.-J. 57
Gurevich, Y. 372
Gurney, R.W. 304
Gurtin, M.E. 37
Gustafsson, T. 121, 157, 318
Guthold, M. 57
Guy, H.R. 97, 98
Guzzi, M. 293
Gyorffy, B.I. 122

Haas, T.W. 435
Haase, J. 304, 318
Haase, M. 293
Häberle, W. 56, 59
Hage, F. 122, 186
Hagemann, H.J. 199
Hagiwara, S. 99
Hagler, A.T. 101
Hagstrum, H.D. 148
Hall, B. 36
Hall, B.M. 158
Hall, J. 100
Hall, P.M. 436
Halliwell, J.V. 95
Hamelin, A. 373
Hamers, R.J. 274
Hamill, O.P. 95
Hamm, U.W. 374
Hammer, L. 318
Hammond, M.S. 148
Han, Y.N. 104
Han, Z.L. 437
Hanke, W. 100
Hanneman, R.E. 35
Hannon, J.B. 157
Hansen, H.S. 437
Hansen, U.P. 99
Hanshew, D.D. 370
Hansma, H. 56, 57, 58
Hansma, H.G. 55, 57, 58, 59
Hansma, P.K. 55, 56, 57, 58, 59, 60
Hansson, G.V. 273, 274
Hanzlik, J. 374
Hara, S. 60
Harbison, J.P. 292
Hardcastle, S. 292, 437
Harp, G.R. 133, 437
Harrington, R.E. 58
Harris, C.B. 186
Harris, W.A. 56
Harten, U. 37
Härter, R. 369
Hartung, K. 99
Hathaway, K.B. 175
Hawkes, A.G. 100
Hayashi, M. 436
Hayashida, H. 95

Hayden, R.K. 218
Haydon, D.A. 96, 97
Haydon, P.G. 56
Hecht, M.H. 292
Heckmann, K. 102
Heiblum, M. 293
Heimann, P. 292
Heimann, P.A. 318
Heine, V. 37, 157
Heinemann, S.H. 102, 104
Heinz, K. 318, 319
Heinzelmann, H. 57
Heitz, F. 102
Held, G. 318
Helgesen, G. 157
Helman, J.S. 148
Henderson, E. 56, 57, 58
Hendler, R.W. 97
Henini, M. 218
Hennig, D. 175
Hennig, R. 133
Henoc, P. 437
Herman, P. 371
Hermann, K. 319
Herring, C. 34
Hertel, T. 304
Hess, P. 99, 103
Heyes, D.M. 35
Heyn, S.P. 59
Heyrovsky, J. 374
Heyrovsky, M. 372
Hibers, P.A.J. 369
Hill, G. 218
Hill, R.N. 157
Hill, T. 103
Hill, T.L. 100
Hillert, B. 318
Hills, G. 371
Himpsel, F.J. 122, 186, 274, 292
Hirata, K. 436
Hirose, T. 95, 96
Hirsch, P.B. 437
Hirschorn, E.S. 273
Hirth, J.P. 36
Hjalmarson, H.P. 218
Hladky, S.B. 96, 97
Hochst,H. 273
Hodgkin, A.L. 94, 99
Hodgson, K.O. 97
Hoeven, A.J. 273
Hoffmann, S. 372
Hoflund, G.B. 157
Hofmann, S. 436
Hoh, J. 58
Hoh, J.H. 56, 58, 60
Hohlfeld, A. 304
Holland, B.W. 318
Hollinger, G. 437
Holloway, P.H. 239, 436, 437
Höltzle, M.H. 374
Holub, K. 374
Holub-Krappe, E. 435
Hong, J.M. 230
Hood, L.E. 98
Hopkinson, J.F.L. 122
Hopster, H. 148
Hopster, H.J. 175
Hörber, J. 56
Hörber, J.K.H. 59
Horn, K. 292, 304
Hoshi, T. 103
Hotlos, J. 373
Houston, J.E. 435
Howald, L. 57
Howard, J. 133
Howie, A. 198, 199, 435, 437
Huang, H.W. 97
Huang, K.G. 37
Huang, Z.Q. 319
Hughes, G.J. 292
Hui, K.C. 318
Hulbert, S. 132
Hulst, N.F. 56
Humpherson, M. 133
Humphreys, M.W. 371
Hunkapiller, M.W. 98
Hurst, C.A. 103
Hurwitz, H.D. 371
Hussain, Z. 319
Huxley, A.F. 94
Hwu, Y. 292

Ibach, H. 36, 158
Ibrahim, M.S. 372
Ichimura, S. 435
Ikeda, T. 95, 96
Ilegems, J.T. 293
Illman, B.L. 198
Inayama, S. 95
Inglesfield, J.E. 175
Ingram, J. 437
Inniss, D. 56
Ipatov, Yu.P. 373
Irish, D.E. 373
Isaacs, H. 373
Ishida, H. 304
Isshiki, N. 273
Itozaki, H. 36
Iverson, L.E. 104
Iyengar, P.K. 158

Jabloński, A. 239, 248, 435, 436
Jackson, J.D. 199
Jacobs, B.L. 58
Jacobson, K.B. 58
Jaeger, R. 318

Jakobsson, E. 100
Jakubith, S. 133
James, T.D. 98
Jan, L.Y. 95, 96, 98, 104
Jan, Y.N. 95, 96, 98
Janak. J.F. 157
Janik, B. 371
Janko, K. 103
Janssen, E. 133
Jansson, C. 437
Jaskólski, W. 223, 230
Jastrzebska, J. 373
Jaszczynski, K. 371
Jeans, J. 100
Jehring, H. 371
Jenard, A. 371
Jenkins, J.G. 436
Jennings, P.J. 122
Jensen, E. 157
Jensen, F. 318
Jentz, D. 318
Jeong, E.J. 158
Jepsen, O. 175
Jertic, D. 97
Jespen, D.W. 318
Ji, Z.G. 319
Jiang, Q.T. 318
Jiang, S.L. 318
Jin, C. 148
Jobin, M. 58
Johannson, C.G. 133
Johansson, B. 175
Johansson, H.I.P. 157
Johansson, L.I. 157
John, S.A. 58, 59
Johnson, E. 132
Johnson, P.D. 148
Jona, F. 148, 318
Jones, G.A.C. 218
Jones, R.O. 122
Jonker, B.T. 148
Jordan, P.C. 100, 101, 103
Jordan, R.E. 186
Joshi, A. 434
Jullien, L. 98
Jung, G. 100
Jurkiewicz-Herbich, M. 373
Jursa, J. 372

Kaganovich, R.I. 371
Kageshima, H. 273
Kahn, A. 292
Kaifer, A.E. 370
Kamal, M.M. 372
Kambe, K. 122, 274
Kanaoka, Y. 95
Kanayo, T. 95
Kaneko, R. 60
Kangawa, K. 95, 96
Karlsson, U.O. 157
Kasas, S. 60
Kasuya, T. 133
Katnani, A.D. 293
Katz, B. 94
Katz, E. 370
Kaukasina, P. 304, 318
Kayano, T. 96
Kazarinov, V.E. 370
Keenlyside, M. 133
Kelderman, G. 57, 58
Kelderman, G.L. 57
Keller, D. 56, 57, 58
Keller, D.J. 57
Keller, R. 57
Keller, R.W. 59
Kern, D. 132
Kerr, D.I.R. 103
Kerry, C.J. 103
Kevan, S.D. 122
Keynes, R. 99, 100
Kharkats, Y. 372
Kharkats, Y.I. 373
Khon, W. 122
Khorsandi, M. 60
Kikyotania, S. 95
Kilcoyne, A.L.D. 318
Kim, C. 133, 292
Kim, H. 58
Kim, K.S. 101
Kim, M.H. 372
Kim, Y.T. 369
King, D.A. 318
King, P.L. 133, 292
Kinoshita, H. 372
Kious, T. 56
Kirschner, J. 148
Kirz, J. 132
Kisker, E. 148
Kitajima, Y. 318, 319
Kittel, C. 157
Kjoller, K. 56
Klitsner, T 273
Knall, J. 218
Knapp, G. 133
Knipping, U. 57
Knoll, W. 60
Kobayashi, K. 273
Koch, E.E. 157
Koeppe, R.E. 97, 98, 100
Koeppe, R.E., III 97
Koetter, E. 274
Kohl, H. 198, 199
Kohler, H.H. 102
Kohn, W. 157
Koike, K.H. 148
Kojima, M. 95, 96
Kolac, U. 186
Kolb, D.M. 373, 374

Kolbe, W. 59
Kolbe, W.F. 59
Kolmogoroff, A.N. 374
Koniarek, J.P. 103
Kono, S. 273
Kontoyannis, C. 372
Koranda, S.F. 133, 292
Kordesch, M.E. 133
Koren, G. 103
Kortright, J. 292, 293
Kortright, J.B. 292
Kosevich, A.M. 36
Kosevich, Yu.A. 36
Kostroun, V.O. 435
Kosyachkov, A.A. 437
Kovariková, E. 371
Kover, L. 437
Kraaer, J. 239
Krasne, S. 99
Krause, M.O. 435
Kretschmer, E. 371, 372
Krewer, J.W. 148
Krizek, J. 133
Kronig, R.deL. 223
Krutzen, B.C.H. 273
Krznaric, D. 371, 372
Kubala, S. 133
Kubiak, G.D. 186
Kubo, H. 104
Kucharczyk, R. 223, 230
Kudrnovsky, J. 175
Kuhlmann-Wilsdorf, D. 35
Kuman, N.M. 99
Kumar, A. 369
Kumar, S. 37
Kuntz, C. 199
Kunz, C. 133
Kuprin, V.P. 373
Kurasaki, M. 95, 96
Kuroda, H. 318
Kurpick, U. 133
Kuschel, F. 372
Kuta, J. 374
Kwan, W.S.V. 369

Lacapère, J.J. 57
Laegsgaard, E. 318
Lahee, A.M. 37
Laibinis, P.E. 369
Lal, R. 56, 58, 59
Laloyaux, Th. 273
Lam, P.K. 157
Lambert, J.P. 371, 375
Lambeth, D.N. 175
Lambin, Ph. 273
Landman, U. 157
Landolt, M. 148
Landskron, H. 318
Landskron, L.H. 318
Lang, N.D. 122, 157, 186, 304
Langeron, J.P. 435
Langmuir, I. 374
Langosch, D. 99
Larché, F. 36
Larsen, P.K. 273
Larson, D.D. 58
Larsson, J. 133
Latorre, R. 95, 97, 99, 102
Lauger, P. 96, 102, 103
Lazarova, E. 374
Le Lay, G. 292
Lear, J.D. 97, 98
Leckey, R.C. 436
Leckey, R.C.G. 436
Lee, C. 370
Lee, K. A. Bunding 370
Lee, M.T. 369
Lee, W.K. 101
Lehmpfuhl, G. 373
Lehn, J.-M. 98
Lehwald, L. 158
Lehwald, S. 36, 158
Leibsle, F.M. 273
LeMoel, A. 437
Lesiak, B. 239, 436
Less-Common, J. 293
Leuchtag, H.R. 104
Levebvre, P. 218
Levie, R. de 374
Levitt, D.G. 101, 102
Lévy, F. 292
Levy, J. 97
Li, Chun 175
Li, H. 148, 370
Li, M.-Q. 58
Li, M.Q. 58
Li, Y.S. 148
Liang, S. 292, 293
Liebich, H.G. 56
Liebovitch, L.S. 103
Liedberg, B. 369
Liesegang, J. 436
Lin, D.S. 273
Lin, J.W. 104
Lindau, I. 133
Linder, Th. 318
Lindfield, E.H. 218
Lindgren, S.A. 304
Lindle, D.W. 319
Lindner, H. 318
Lindpaintner, K. 104
Lindroos, M. 304, 318
Lindroos, P.M. 318
Lindsay, S.M. 57, 58, 370, 374
Lindstrom, J. 98
Linford, G. 370
Ling, P.L. 292

Linman, E.R. 103
Lipinski, J.J. von 372
Lipkowski, J. 371, 373, 374, 375
Lippmann, B.A. 274
Liu, C. 148
Liu, W. 97, 318
Lodders, F. 133
Löffler, U. 318, 319
Logan, R.A. 293
Logthetis, D.E. 104
Lohse, H. 372
Loiacono, D. 369
Longmire, M. 59
Lopez, G.P. 369
Lorenz, W. 370, 374
Lorenzi, G.P. 60
Lou, J.R. 318, 319
Louis, E. 293
Lourenco, A.J. 57
Love, G. 436
Lu, M. 148
Lucas, A.A. 273
Ludeke, R. 274
Lundgren, E. 157, 304
Luo, K. 56, 57
Lüpke, G. 373
Lutsko, J.F. 37
Lynch, M. 369
Lyon, M.K. 59
Lyubchenko, Y.L. 57, 58

Maca, F. 274
Macdonald, J.E. 273
MacDonald, N.C. 436
Macias, F. 102
Mackay, D.H.J. 101
MacKinnon, R. 102
MacLaren, J.M. 175
Madsen, J. 175
Maestre, M.S. 371
Magleby, K.L. 103
Magnussen, O.M. 373
Mahavadi, P. 148
Mahnel, H. 56
Mailhiot, C. 218
Majlis, N. 148
Makowski, L. 99
Malmström, G. 122
Malyshev, A. 148
Mambetkaziev, E.A. 371
Manne, S. 56, 59
Mannella, C.A. 98
Mansfield, M. 35, 158
Manson, J.R. 198
Mao, D. 292
Maoz, R. 369
Mapledoram, L.D. 318
Marcus, P.M. 148, 318
Marée, P.M.J. 273
Margaritondo, G. 133, 291, 292, 293
Marks, L.D. 37, 198
Marmont, G. 94
Marner, B. 374
Marowsky, G. 373
Marsh, T. 56
Marshall, G. 100
Marsi, M. 292
Mårtensson, P. 273
Martin, D. 293
Martin, G.M. 36
Martinez, R.E. 35
Marty, A. 95
Massey, S.W. 239
Massie, J. 59
Mater, J. 175
Materer, N. 318, 319
Mathew, M.K. 104
Mathey, L. 437
Mathieu, H. 218
Matsuda, R. 60
Matsuo, H. 95, 96
Matthew, J.A.D. 435
Matthews, J.W. 36
Matzdorf, R. 133
Maurice, F. 437
Mauzerall, D. 97
Mayr, A. 56
Mays, C.W. 35
McCarley, R.L. 369
McCleskey, E.W. 99
McClosky, M. 59
McClung, M.B. 198
McComb, D.W. 199
McCormack, K. 104
McCormack, T.T. 104
McDonnell, L. 437
McFarlane, R.A. 319
McGee, R. 103
McGovern, I.T. 292
McGrath, R. 319
McGuire, E.J. 435
McGuire, G.E. 436
McIntyre, N.S. 437
McKinley, A. 292
McKinley, J.T. 293
McLennan, G. 370
McManus, O.B. 103
McRae, E.G. 186
Meade, R.D. 35, 36, 274
Meier, F. 122
Meister, G. 133
Melik-Gaikazyan, V.I. 374
Mendez, E.E. 230
Mendez, M.A. 318, 319
Menyhárd, M. 436
Menzel, D. 318

Mercanti, D. 133
Mercanti, Delio 292
Merlie, J. 98
Merrifield, R.B. 97
Merry, W.R. 186
Methfessel, C. 99
Methfessel, M. 175
Meurée, N. 371
Meves, H. 96
Meyer, E. 57
Meyer, G. 55
Miami, A. 96
Michaelis, R. 373
Michalk, G. 318
Michette, A.G. 133
Midami, A. 95
Miedema, A.R. 293
Milanovic, V. 223
Milchev, A. 373
Milhauser, G. 104
Miller, C. 95, 98, 99, 102, 369
Miller, C.J. 370
Miller, L. 369
Miller, R. 56
Miller, R.G. 57
Mills, D.L. 36, 148, 158
Milne, R.H. 198, 318
Minamino, N. 95
Mintmire, J.W. 157
Mirbt, S. 175
Mitchell, K.A.R. 318, 319
Miyata, T. 95
Miyazake, S. 99
Mochrie, S.G.J. 37, 157
Mockel, F. 374
Moeller, J.F. 56
Moewes, A. 133
Mogami, A. 436
Mohilner, D.M. 370, 374
Molinàs-Mata, P. 274
Möller, R. 437
Moncelli, M. 374
Moncelli, M.R. 375
Monnier, R. 175
Montgomery, W. 292
Mooney, P.M. 293
Moore, J.W. 100
Moore, L.E. 100
Moore, W.T. 318
Morabito, J.M. 436
Morier-Genoud, F. 293
Morin, P. 437
Morin, S. 373
Moritz, W. 304, 318
Morres, D.L. 435
Morret, H. 57
Moritz, W. 319
Morrow, J.S. 96
Moruzzi, V.L. 157
Mostoller, M. 157
Mott, N.F. 239
Mousty, C. 372
Movahedi, S. 104
Mowry, R. 370
Mróz, A. 436, 437
Mróz, S. 435, 436, 437
Mrozek, P. 436
Mueller, K. 318
Mueller, P. 96
Mujica, V. 273
Mujsce, A.M. 370
Mukergee, B. 59
Mularie, W.M. 435
Mulder, W.H. 374
Müller, E. 371, 372
Müller, K. 318
Mullins, W.W. 34
Munakata, T. 133
Muñdoz, E. 371
Mundschau, M. 133
Münger, P. 133
Muñoz, A. 218, 293
Muñoz, M.C. 218
Murphy, J.C. 374
Murray, M.N. 59

Nadal-Ginard, B. 104
Nagahara, L.A. 57
Nagasawa, Y. 437
Nakagawa, K. 273
Nakamura, Y. 60
Nakayama, H. 95
Naneva, R. 373
Narahashi, T. 95
Nathan, M.I. 293
Navetta, F.I. 100
Needs, R.J. 35, 37, 158
Neevel, J.G. 98
Nefedov, V.I. 238, 248
Neglia, A. 293
Neher, E. 95, 96, 99
Neilsen, M. 273
Němec, L. 374
Nesbet, R.K. 121
Nettesheim, S. 133
Neugebauer, J. 304
Neumann, M. 437
Neve, J. 304
Newbury, R. 218
Ng, W. 292, 293
Nicholls, J.M. 273
Nichols, R.J. 373
Nicholson, M.M. 35
Nicholson, R.B. 437
Nichtl-Pecher, W. 318
Niehaus, A. 148
Nielsen, M. 304, 319

Nikitas, P. 370, 373
Nikolaeva-Fedorovich, N.V. 371
Niles, D.W. 293
Nishimori, N. 436
Niu, L. 58
Nix, W.D. 37
Noda, I.M. 95
Noda, M. 95, 96, 104
Noguera, C. 273
Nolte, R.J.M. 98
Nolting, W. 121, 122
Nonner, W. 95
Norman, D. 318
Norris, C. 273
Northern, B.D. 59
Northrup, J.E. 273, 274
Nourtier, A. 199
Novakov, T. 239
Novotny, L. 372
Nowicki, H. 436
Numa, S. 95, 96, 104
Nürnberg, H.W. 371, 372
Nusair, M. 175
Nyholm, R. 157, 304

Obretenov, W. 374
Ocko, B.M. 373
Oden, P.I. 58
Oed, W. 318, 319
Oepen, H.P. 148
Offord, D.A. 369
Ogawa, H. 60
Ogletree, D.F. 59
Oguchi, S. 60
Oguchi, T. 148
Ohmura, T. 240
Ohnesorge, F. 56, 59, 60
Ohno, H. 230
Ohring, M. 35
Ohta, T. 318, 319
Okada, T. 60
Olah, G.A. 97
Oliva-Florio, A. 148
Onuferko, J.H. 318
Ormeci, A. 158
Orowan, E. 37
Ortega, J. 293
Osipov, E.V. 371
Ottolenghi, A. 292
Over, H. 304, 318, 319
Overney, R.M. 57
Oxford, G.S. 99

Padowitz, D.F. 186
Palczynski, J. 435, 436
Pale-Grosdemange, C. 369
Pallotta, B.S. 98
Palmberg, P.W. 434, 435, 436
Pampanelle, J.T. 104
Pan, F.P. 198
Pan, J. 370
Pan, X. 157
Pandey, R.C. 97
Papagno, L. 318
Papanastasiou, G. 373
Papazian, D.M. 96, 98, 103, 104
Parkin, S.S.P. 175
Parlin, R. 100
Parpura, V. 56
Parsons, R. 370, 371
Paschley, D.W. 437
Passek, F. 186
Pasturel, A. 175
Pate, M.A. 218
Patella, F. 293
Pattabiraman, N. 374
Pattoret, A. 157
Paul, D.L. 99
Peacock, D.C. 218
Pedersen, J.S. 273
Pedio, M. 318
Pendry, J.B. 122, 175, 186, 198, 273, 318, 319, 437
Penn, D. 148
Penn, D.R. 436
Penney, W.G. 223
Pepper, M. 218
Perera, R. 292, 293
Perera, R.C.C. 292, 293
Peressi, M. 293
Perfetti, P. 292, 293
Peria, W.T. 435
Perozo, E. 103
Pescia, D. 122
Peterson, C.M. 59
Pethica, J.B. 218
Petrii, O.A. 370
Pettinger, B. 373
Pfeiffer, J. 56
Pflanz, S. 304
Pfnür, H. 318
Philipp, R. 371
Phillips, W.C. 99
Pianetta, P. 133, 292
Pierce, D.T. 122, 175
Piercy, P. 318
Pietrzak, T.M. 373
Pijolat, M. 437
Pillai, K.C. 371
Pivacoba, A. 198
Platero, G. 218
Plociennik, J.M. 437
Plummer, E.W. 157, 304
Plummer, I.R. 133
Pohl, K. 157
Pokorny, J. 372
Polymeropoulos, E.E. 101

Pongs, O. 95, 104
Popenoe, D.D. 369
Popov, A. 373
Porte, A. 436
Porter, H.Q. 132, 133
Porter, M.D. 369, 370
Pospišil, L. 371, 372
Pospišil, P. 374
Potts, A.W. 133
Poussart, D. 100
Powell, C.J. 239, 435, 436
Prater, C.B. 55, 57, 59, 60
Prechtel, U. 293
Prêtre, A.B. 273
Price, C.W. 36
Prime, K.L. 369
Prinz, G. 175
Prinz, G.A. 148
Procopio, J. 102
Prucnal, P.R. 223
Prussak, Z. 436
Pullman, A. 101
Putman, C. 59, 60
Putman, C.A.J. 56, 59
Putman, D.B. 59
Putvinski, T.M. 370

Quagliariello, C. 58
Quaresima, C. 292, 293
Quarin, G. 371, 372
Quate, C.F. 55, 56, 59
Quinn, J. 148
Qvarford, M. 304

Race, W.P. 374
Radmacher, M. 56, 57, 59, 60
Rae, J. 102
Raftery, M.A. 95, 98
Raghunathan, G. 97
Rahmani, A. 372
Raicheff, R. 374
Ramachandran, G.N. 96
Ramachandran, J. 99
Ramamurthy, A.C. 371
Ramsey, R.L. 103
Ranganathan, S. 101
Rangarajan, S.K. 373
Rangelov, G. 186
Rao, P. Venugopalo 435
Raouadi, K. 437
Rau, C. 148
Ravikumar, K. 97
Ray, K.B. 157
Ray-Chaudhuri, A.K. 292
Reale, V. 99
Rees, W. 57
Rees, W.A. 59
Reeves, R.M. 370
Rehm, H. 95, 99
Reilly, C.N. 374
Rennert, P. 437
Resta, R. 293
Retter, U. 371, 372, 373, 374
Retter, Y. 373
Reuter, W. 435
Revel, J.-P. 58, 60
Rhee, L.M. 99
Rhodin, T.N. 435
Ri-Sheng-le 436
Riach, G.E. 436
Richer, J. 373
Richter, R. 148, 175
Rieβ, H.J. 186
Rienitz, A. 99
Riess, H.J. 122
Riggs, W.M. 435
Rill, R.L. 57
Rinehart, K.L. 97
Rioux, D. 293
Ritchie, D.A. 218
Ritchie, R.H. 198, 199, 435, 436
Rivacoba, A. 198, 199
Robert, M. 148
Robinson, A.W. 318
Robinson, I.K. 319
Rodrigu, H. 99
Rodriguez-Amaro, R. 371
Rogozik, J. 186
Rojas, E. 100, 102
Romanowski, S. 373
Romer, D.U. 60
Rosenberg, N. 435
Rosenberg, P.A. 102
Rosenblatt, M. 97
Rosengaard, N.M. 175
Rotermund, H.H. 133
Roth, S. 57
Rouelle, F. 371
Rous, P.J. 319
Roy, A.P. 158
Rubinstein, I. 369
Rudin, D.O. 96
Rudolph, D. 133
Rudra, A. 293
Rudy, B. 104
Ruiz, J.J. 371
Rundgren, J. 122, 304
Rupert, L.A.M. 369
Russell, E.W. 100
Ruud, J.A. 36

Saalfeld, H. 435
Sabatani, E. 369
Sabin, J.R. 157
Sachs, F. 95
Sacks, W.S. 273, 393
Saffarian, M.H. 372

Sagawa, T. 273
Sagiv, J. 369
Sagner, H.J. 157, 304
Sai, M. 95
Sakaguchi, D.S. 56, 59
Sakai, Y. 437
Sakmann, B. 95
Salamon, M. 175
Saldin, D.K. 318, 437
Salmeron, M. 59, 318
Salmeron, M.B. 59
Samorí, B. 58
Samsavar, A. 273
Samson, M.S.P. 103
Sanchez, I.C. 36
Sanchez-Dehesa, J. 218
Sandy, A.R. 37
Sangaranarayanan, M.V. 373
Sanjinés, R. 292
Sano, T. 59
Santos, M. 292
Sanysson, D.H. 435
Sarges, R. 96
Saris, F.W. 319
Sathyanarayana, S. 370, 371
Satler, C. 104
Sato, H. 319
Sato, T. 437
Sautet, Ph. 318
Scaringe, R.P. 369
Schabtach, E. 56
Schadler, G.H. 175
Schaefer, V.J. 374
Scharfe, M. 372, 373, 374
Scheffler, M. 175, 273, 274, 304, 319
Scheingraber, H. 157
Schell-Sorokin, A.J. 35
Schier, H. 57
Schlapp, W. 293
Schluter, M. 293
Schmahl, G. 133
Schmalz, A. 304
Schmeits, M. 199
Schmicker, W. 374
Schmid, E. 293
Schmid, P.E. 293
Schmid, R. 436
Schmidt, H. 370
Schmitt, B. 99
Schmitt, F.J. 60
Schneider, J. 373
Schneider, M. 133
Schneider, R. 122
Schoenlein, R.W. 186
Schofield, P.R. 99
Schottky, W. 292
Schrettenbrunner, M. 373
Schrick, J.J. 58
Schroder, H. 100
Schuhmann, D. 370, 374
Schuller, I.K. 37, 175
Schulthess, T. 175
Schultz, R. 99
Schumaker, M. 102
Schuppler, S. 186
Schuster, R. 274
Schwarz, T.L. 96, 98
Scott, V. 436
Seah, M.P. 239, 435
Sébenne, C.A. 274
Seeburg, P.H. 99
Segerink, F.B. 59, 60
Seifert, K. 369
Sekine, T. 436, 437
Sellers, H. 369
Selloni, A. 274
Selzer, S. 148
Senft, J. 100
Settlemoyer, A.C. 374
Shai, Y. 97
Shaiu, W.L. 58
Shaler, A.J. 34
Shao, Z. 58
Shayegan, M. 292
Shelton, J.C. 436
Shi, Z. 374
Shih, H.D. 318
Shimizu, R. 239, 435, 436
Shimizu, S. 95
Shirley, D.A. 319, 435
Shirykalov, E.N. 157
Shlyakhtenko, L.S. 58
Shnidman, Y. 369
Shuttleworth, R. 34
Sickafus, E.N. 435
Sidnin, A.I. 373
Siegbahn, K. et al 435
Siegerist, C. 56, 57
Siekhaus, W. 239
Sieradzki, K. 35, 36, 37
Sigmund, P. 248
Sigworth, F.J. 95, 102
Siligardi, G. 56, 58
Silkin, V.M. 157
Silva, F. 371
Simon, E.S. 369
Sinder, D.A. 370
Singh, S. 57, 292, 293
Sinkovic, B. 148
Sinsheimer, R.L. 57, 58
Sizmann, R. 148
Skerra, A. 101
Skoluda, P. 373, 374
Skompska, M. 371, 373
Skottke-Klein, M. 304, 318
Skriver, H.L. 175
Slavin, A.J. 274

Sluyters, J.H. 374
Sluyters-Rehbach, M. 374
Small, M.K. 37
Smeenk, R.G. 319
Smit, B. 369
Smith, C.L. 59
Smith, D.J. 37
Smith, D.L. 218
Smith, D.M. 435
Smith, D.P.E. 59
Smith, J.R. 36
Smith, N.V. 122, 148, 186
Smith, S.C. 293
Smoluchowski, R. 157
Sŏb, B. 175
Sobolev, V.V. 248
Sodhi, R.N.S. 319
Solleder, P. 102
Solletti, J.-M. 60
Somers, J.S. 318
Somorjai, A. 318, 319
Somorjai, G.A. 318, 319
Sondag-Huethorst, J.A.M. 370
Sotiroupolos, S. 370
Soven, P. 121
Spach, G. 102
Spaepen, F. 36
Spengler, S. 59
Spivak, C.E. 103
Sprunger, P.T. 157
Sridharan, R. 371, 372, 373
Sridharan, S. 374
Srinivasan, R. 371, 374
Staehli, J.-L. 293
Stampfl, C. 304, 319
Stanfield, P.R. 99
Stark, G. 103
Starke, K. 186
Starke, U. 318, 319
Starzak, M. 99, 100, 101, 102, 103
Starzak, R. 100
Stefani, E. 103
Steinbach, J.H. 95
Steinberg, S. 369
Steinhoff, R. 373
Steinmann, W. 122, 186
Stenina, E.V. 370, 371, 373
Stensgaard, I. 318
Stephenson, F.M. 99
Stern, R.M. 437
Stęślicka, M. 223, 230
Stickel, W. 199
Stillman, G.E. 293
Stimers, J.R. 100
Stober, J. 186
Stocker, M. 104
Stoeckenius, W. 59
Stöhr, J. 318
Stokes, D.L. 57
Stolberg, L. 373
Störi, H. 240, 248, 436
Storjohann, I. 133
Strader, C.D. 98
Strand, T.G. 435
Straub, D. 122, 186
Streitz, F.H. 35, 37
Streubel, P. 436
Strong, P.N. 98
Stroud, D. 198
Stroud, R. 97
Stryer, L. 96, 97
Stucky, G.D. 57
Stuhmer, W. 104
Stumm, W. 374
Sulhok, A. 436
Sullivan, J.M. 103
Sun, L. 369
Sun, Yu-Zhen 436
Sung, S.S. 101
Suzuki, H. 95, 96, 104
Suzuki, S. 273
Swan, J.A. 98
Swartzentruber, B.S. 273
Szajman, J. 436
Szleifer, I. 369

Taborelli, M. 58
Taborski, J. 133
Tadjeddine, A. 372
Takahashi, H. 95, 96
Takai, T. 95
Takashima, H. 95
Takata, Y. 318, 319
Takeshima, H. 95, 96
Takeuchi, N. 274
Takeyasu, K. 58
Tamaswami, M. 104
Tamm, L.K. 57
Tamura, E. 148
Tanabe, I.T. 96
Tanabe, T. 95
Tang, C.L. 57
Tanouye, M.A. 104
Tanuma, S. 436
Tao, N. 370
Tao, N.J. 374
Tao, Y.T. 369
Taylor, N.J. 434
Taylor, R.E. 100
Tejedor, C. 218, 293
Temerk, Y.M. 372
Temple, B.L. 95, 96, 98
Temrokov, A.I. 35
ten Heggerler-Bordier, B. 58, 59
Tersoff, J. 293
Thaper, C.L. 158

Thirsk, H.R. 374
Tholomier, M. 435
Thomas, F.G. 371
Thomas, L. 99
Thomas, R.C. 369
Thörner, J.G. 121
Thundat, T. 57, 58
Tian, D. 148
Tichy, G. 35
Tieffenberg, M. 96
Tilinin, I.S. 239, 248
Tillack, T.W. 57
Tillamnn, R.W. 59
Tille, J. 103
Timpe, L.C. 104
Titterington, D.J. 122
Tjapkin, D. 223
Todorova, I. 103
Toennies, J.P. 37
Tofterup, A.L. 240, 248, 435
Tokutaka, H. 436
Tolk, N.H. 292, 293
Tong, S.Y. 158
Tonner, B.P. 133, 292, 437
Tordai, L. 374
Tosatti, E. 274
Tosteson, D. 97
Tosteson, D.C. 96
Tosteson, M.T. 97
Tougaard, S. 239, 240, 248, 435, 437
Tournas, A.D. 133
Toyosato, M. 95
Trachtenberg, I. 374
Tran Thoai, B.D. 199
Tranchina, D. 102
Trasatti, S. 370
Trebbia, P. 198, 199
Trickey, S.B. 157
Tromp, R.M. 35, 319
Truedelle, Y. 102
Tsien, R.W. 99
Tsukada, M. 273
Tucci, R. 318
Tuncel, E. 293
Tung, C.J. 436
Turek, I. 175
Turner, D.W. 132, 133
Twomey, T. 373

Ueda, A 293
Uehara, M. 372
Ugarte, D. 198
Uhrberg, R.I.G. 273, 274
Ulman, A. 369
Umbach, E. 133
Underwood, J.H. 292, 293
Unwin, N. 98
Unwin, P.N.T. 99
Urankar, E. 369
Urry, D.W. 96
Usherwood, P.N.R. 103

Valadares, E.C. 218
Valenta, P. 371, 372
Van, H.N. 59, 60
van Acker, J.F. 304
van der Veen, J.F. 273, 319
van der Werf, K.O. 59
Van Hove, M.A. 318, 319
van Hulst, N.F. 56, 59
Van Laetham-Meurée, N. 371
Van Os, N.M. 369
van Silfhout, R.G. 273
van Wittenau, A.E. Schach 319
Vandenberg, C.A. 103
Vanderbilt, D. 35, 36, 38, 274
Veatch, W. 96, 97
Veatch, W.R. 97
Vegerfors, G. 133
Velasco, V.R. 218
Venables, J.A. 437
Vercauteren, D.P. 101
Vergara, C. 95
Vergerford, G. 133
Vermaak, J.S. 35
Vesenka, J. 56, 57, 58
Vesenka, J.P. 59
Vetterl, V. 371, 372
Vicario, E. 435
Vickers, J.S. 273
Victora, R.H. 175
Vidal, C.R. 157
Viefhaus, H. 437
Vigneron, J.-P. 273, 274
Vitanov, T. 373
Vitek, V. 35
Vlassak, J.J. 37
Vlieg, E. 319
Vodyanoy, I. 100
Vogl, P. 218
Volmer, M. 374
von Lipinski, J.J. 372
von Oertzen, A. 133
von Wittenau, A.E.S. 319
Vosko, S.H. 175
Voss, J. 133
Voyer, M.J. 98
Vu Grimsby, D.T. 319
Vvedensky, D.D. 175

Wachieski, A. 198
Waghorne, W.E. 371
Wagner, C.D. 435
Wagner, J.W. 37
Wagner, T. 57
Wagoner, P.K. 98, 99

Walczak, M.M. 369
Walker, K.H. 148
Walker, W.P. 36
Wallace, B.A. 96, 97
Wallace, J. 292, 293
Wallace, J.P. 292, 293
Walldén, L. 304
Walls, M.G. 198
Walsh, C.A. 198
Walters, G.K. 148
Walton, D. 374
Wander, A. 318, 319
Wandlowski, I. 373
Wandlowski, T. 371, 372
Wang, J. 373
Wang, L.-Q. 319
Wang, L.S. 319
Wang, M. 103
Wang, X. 104
Wang, Z.L. 198
Wannberg, B. 133
Ward, A.F.M. 374
Wardell, I.R.M. 133
Warmack, R.J. 57, 58, 198
Wasserman, H.J. 35
Wasserman, Z.R. 97, 98
Waters, K. 148
Watson, G.M. 157, 304
Watson, P.R. 319
Weaver, F. 103
Weaver, M.J. 373
Webb, J.W. 371
Weber, A. 374
Weber, K. 370
Weber, R.E. 436
Wedler, H. 318
Weeks, J.J. 36
Wei, S. 38
Wei, S.-H. 218
Weimann, G. 293
Weinberg, W.H. 318
Weinberger, P. 175
Weinert, M. 122, 133, 148
Weinstein, S. 96, 97
Weinstein, S.J. 97
Weisenhorn, A.L. 55, 57, 58, 59, 60
Weiss, D.S. 103
Weiss, L.B. 100
Weiss, W. 133
Welder, H. 319
Welnak, J.T. 292, 293
Welti, M. 101
Wentzcovitch, R.M. 157
Wenzien, B. 175
Werner, W.S.M. 239, 240, 248, 436
Westerhoff, H.V. 97
Westhof, J. 133
Westrin, P. 304
Wheatley, D.J. 198
Whelan, M.J. 437
Whitesides, G.M. 369
Widrig, C.A. 370
Wieczorek, A. 437
Wijenberg, J.H.O.H. 374
Wilk, L. 175
Williams, A.F. 157
Williams, R. 293
Williams, R.H. 292
Willicut, R.J. 369
Wilson, K.R. 101
Wimmer, E. 157
Wintterlin, J. 318
Witkop, B. 96
Witrvrouw, A. 36
Wolf, D. 35, 37
Wolf, F. 36, 158
Wolff, E.K. 59
Woll, Ch. 37
Wöll, Ch. 369
Wong, P.C. 319
Wood, D.M. 218
Woodall, J.M. 293
Woodruff, D.P. 318, 437
Worcester, D.L. 57
Wouters, A.F. 148
Wu, Ru-qian 175
Wu, T.-Y. 240
Wu, Y. 97
Wu, Y.K. 319
Wüstenhagen, V. 133
Wynblatt, P. 36

Xing, G. 148
Xu, J. 370

Yacoot, A. 133
Yagi, S. 319
Yahagi, N. 104
Yang, G. 58, 59
Yang, J. 57, 58
Yang, N. 148
Yanivsky, A.J. 97
Yater, J. 158
Yates, J.T. Jr. 318
Yogeeswaran, G. 98
Yokotsuka, T. 273
Yokoyama, T. 318, 319
Yorgancioglu, M. 56, 57
Yoshikawa, S.A. 133
Young, J.B. 99
Yu, L. 58
Yun, K.S. 35
Yusupova, V.A. 370
Zabala, N. 198, 199
Zadumkin, S.N. 35
Zagorenko, A.J. 436

Zagórski, M. 437
Zagotta, W.N. 103
Zaludová, R. 371
Zampighi, G. 99
Zaporozchenko, V.J. 436
Zaremba, C.M. 57
Zasloff, M. 97
Zegarski, B.R. 369
Zegenhagen, J. 274
Zehner, D.M. 37, 157
Zei, M.S. 373
Zeijlmans Van Emmichoven, P.A. 148
Zeitler, E. 199
Zeldovich, J.B. 374
Zeng, H.C. 319
Zenhausern, F. 58, 59
Zensen, M. 99
Zhang, J. 133, 437
Zhang, X.-G. 122
Zhang, Y. 370
Zhao, Z. 57
Zheng, N.J. 148
Zhong, Q. 56
Zhou, M.Y. 318
Zimmermann, R.M. 57
Zingsheim, H.P. 96
Zobala, N. 199
Zojaji, M. 98
Zunger, A. 218

SUBJECT INDEX

Alkali-metal adsorption
  on Al(111), 295-303
    activated, 299-301
    K-Al(111) interface 298, 301
    Na-Al(111) interface 298, 300, 301
    non-activated 296, 297-299
    work function coverage dependence in, 301-302
Atomic Force Microscopy (AFM) 39-55
  benefits of 40-41
  development of 40
    future in 53-55
  future applications of 53-54
    in cell biology 54
    in molecular biology 54-55
  imaging conditions in
    cantilever selection 46
    cell type 45
    data display 46-47
    scan rate 46
    substrate 45
    tip selection 46
  imaging methods in
    contact mode 41-42
    lateral force 42
    noncontact mode 32
    tapping 42
  of living cells
    common tip artifacts 43
    tip inaccessibility to specimen 43
    tip/sample image convolution 42-44
    tip shape contribution 43, 44-45
  scanning tips in 40, 42
  summary of reports of 48
    in cardiac function 52
    fixed cells 47-48, 49
    living cells 48-52
    neuron-glia interactions 52-53
    platelet activation 52
Auger electron current determination
  Auger electron emission in
    from homogeneous depth 385, 388
    from homogeneous surface 385-388
  Auger transition probability
    radiation and transitions in 393-394
    X-ray fluorescence 394
  backscattering factor in 394-400
    elastic 395-396
    as function of incidence angle 397
    inelastic 396-397
    Jablonski 394-395
  backscattering factors in
    from energy distribution of secondary electrons 397-398
  inelastic mean free path and attenuation length in 400-409
    attenuation length in 401 402-403
    coefficient of elastic scattering 406-407
    critical discussion of 408-409
    elastic peak area measurement in, 406
    Fano plots in 404-406
    multiple approximation in 406-407
    optical data in 404
    overlayer technique in 400
    relationship of 407-408
    statistical approximation of dielectric function 404
    universal curve for 401
  inner shell ionization cross section in
    experimental 390-382

(Auger electron...inner shell)
physical models 389-390
semi-empirical formulae 390
Auger emission spectroscopy (AES) 425-432. See also Quantitative Auger Analysis (QAA)
crystalline effects in angular distribution of 429-432
diffraction of primary electron beam 425-429

Beryllium surfaces 151-156
electronic states of 153-154
surface versus bulk 154
phonon dispersion Be(0001) 154-156
Rayleigh wave 154
shear horizontal phonon band 154
properties compared with other metals 149-151
structure of 151-153
universal curve in 152

Crystal structure 251-319

Edge-state models, electron gas (2-D) in magnetic field. See Electron gas (2-D) in magnetic field
Electron gas (2-D) in magnetic field
simple edge-state models of 201-209
confining barrier in 201
crystalline stripe with step edges 204-208
finite step potential confinement 202-204
Electron transport in non-crystalline solids
electron spectroscopy of 241-248
angular/energy distribution from homogeneous targets 2426-247
assumptions in 242
escape probability calculations in 245
radiative field similarity principle in 244
regimes in 243, 244
theoretical 242-244
Electronic structure 107-248

Interface stress in thin films 16-23
(Interface stress...)
solid-solid 16-18
stretching both phases equally 19-23
of grain boundaries 23
lattice parameter measurements in 20-22
molecule in crystalline polymer lamella 20
in multilayered films 22
for noncoherent metal-metal 19, 20
stretching one phase relative to other 18-19

Kronig-Penney-type model
semi-infinite superlattices
density of state studies in 225-230
surface-state energy expression in 219-223
Kronig-Penney-type model, semi-infinite superlattices 219-230. See also Superlattices, semi-infinite

Laterally resolved (UV) photoelectron spectroscopy (LARUPS)
Au/Si 124-125
CO/Pd(111) 125-126
CO/Pt(111) 126-127
electron analyzer in 128
energy window in 130-132
Fresnel zone plate in 127-128
laser radiation in 132
mirror optics in 128-130, 131
photoelectron emission microscopes (UV-PEEM) 125
Living cells, atomic force microscopy of 39-55. See also Atomic Force Microscopy (AFM)

Magnetic field, simple edge-state models of electron gas in 201-209. See also Electron gas (2-D) in magnetic field
Magnetism of surface and interface
bct Fe(100)(1x1)Pd(100) 137, 141
electron spin polarization, 2D Ising model 137, 141-142, 146-147
surface versus bulk magnetism 146-147

(Magnestism...bct Fe(100)...)
temperature dependence in 141-142
clean Fe and Fe/Pd surfaces
ESP of low-energy emitted electrons 137, 143-144
Stoner excitation enhancement of 145-146
ECS and SPEES of
experimental 138-141
contamination measurement 141
deposition of magnetic films 141
electron capture process 138
ferromagnetic orders in 138-139
sample preparation 140
results 141-147
ferromagnetism at ≈30K above bulk Curie T(220K) of Tb 137, 140, 142-143
O/Fe surface
nonzero ESP demonstrates absence magnetically dead surface layer 137, 143, 144-145
Pd Auger electrons from Fe/Pd spin polarized
magnetic surface anisotropies in 143
5nm surface hcp Tb(0001)/W(100) films 137, 142-143
significance of 135-137
ECS and SPEES of
Membrane channels 65-94
gating kinetics of
channel structure and 92-93
charge motions in 90-91
Cole-Moore effect shift 88-90
gating molecule analogs 91-92
independent gating models
driven 87-88
sequential 86-87
molecular structure of 65-69
alamethicin 66-67
future directions in 94
gramicidin 65-66
natural 67-69
synthetic 67
permeability of 77-86
diffusion models 82-83
fluctuation and 84
laser Doppler velocimetry in 85-86

(Membrane...permeability of)
multi-ion channels 73, 83-84
noise and 84
ohmic conductivity 77-78
Parlin-Eyring models 78-80
stochastic models 80-82
properties of 69-77
Cole-Moore effect 74-75
gating currents 75
independence principle 72-74
oscillations 69-71
permeability kinetics 71-72
single channel events 76-77
study techniques for
DNA analysis in 64, 67
patch clamp 63-64, 76
voltage clamp 62-63
Monolayers, self-assembled. See Self-assembled monolayers (SAM)

Overlayers, random magnetic 159-174. See also Random magnetic surfaces, electronic properties of

Photoelectron microspectroscopy
laboratory UV-photon source in 123-132. See also Laterally resolved (UV) photoelectron spectroscopy (LARUPS)
Photoemission
full potential theory in
dipole operator in 120-121
phase functional approach, multiple scattering 117-119
scattering matrix for single layer 119-120
general theory 107-109
relativist theory in
GaAs(110) results 115-116
one-step model 114-115
surface states calculation
effective surface barriers Cu(111), Cu(100), Cu(110) 111-114
one-step model: surface contribution 110-111
results for Cu(110) 111, 112
theoretical developments in 107-121
two-photon
on alkali metal overlayers
K/Cu(111) 185, 186

(Photoemission...on alkali...)
K/Fe(110) 185, 186
Na/CO(0001) 185, 186
Na/Cu(111) 185, 186
Na/Fe(110) 185, 186
on clean metal surfaces 180-182
binding energies and work function in 180, 181
ferromagnets 180
noble 180
image states in 177-178
on noble metal overlayers
image state energies in 182-184
photoelectron spectroscopy of 178-180, 181
wave function of image states 182-184

Quantitative Auger Analysis (QAA)
of amorphous heterogeneous samples 419-423
atomic concentration in 421-423
binary alloy 420-421
in depth 419
in-depth analysis 419, 423-425
simplest case 419-420
in step profile of silver 423-424
of amorphous homogeneous samples 409-418
determined by QAA and bulk composition 416-418
Auger electron current determination in 385-409
Auger electron emission in 385-388
Auger transition probability 393-394
backscattering factor in 394-400
inelastic mean free path and attenuation length in 400-409
inner shell ionization cross section in 389-392
Auger signal in 381-385
inelastic background in determination of 383-384
scattering in 384-385
peak of maximum and minimum 381-382
crystalline effects in AES
angular distribution of AES 429-432
(QAA, crystalline effects in)
diffraction of primary electron beam 425-429
minimization of error in 433-434
Quantum wells
electronic properties of
AlAs layer 217
GaAs layers 211, 212, 215-217

Random magnetic surfaces
electronic properties of
calculated work functions: Fe and CO/Cu(001) 173-174
coherent potential approximation approach 161, 162, 163
constituent potentials in atomic sphere approximation 161
formalism of 161-167
investigative techniques in 159-160
layer-resolved densities of states 167
linear muffin-tin orbital method 160-161
numerical results $Fe_{100-x}Co_x$/fcc Cu(001) 167, 170-172
surface Green function in 160, 161, 164-165
tight-binding linear muffin-tin orbital in local spin density approximation 161, 165-166
vacuum region in 161
Relaxations on metal surfaces
adsorbate-induced
buckling in 316
C, K, O, and S/Ni(100), 308-309
C_2H_3/Rh(111) and Pt(111) 311-312
Cl, N, S/Cu(100) 309
CO/Ru(0001) 316
Cs/Ru(0001) 316
on fcc(100) 306-309
on fcc(111) 309-314
H and O/Ru(0001) 315
H/Ni(111) 310
on hcp(0001) 314-316
K/Ni(111) and Al(111) 313-314
NO/Ni(111) and Pt(111) 312-313

(Relaxations...adsorbate...)
O, S, Cl/Ni(111) and Pt(111) 311
radial lateral 317
rotational displacements 317
S/Re(0001) 316
S/Rh(100) 309

Scanning Transition Electron Microscopy (STEM), surface plasmon excitation by 187-198. See also Surface plasmon excitation
Scanning tunneling microscopy (STM)
of Ge(111)-c(2x8)
ARPES results 252, 256
IPS results 256
of Ge(111)-(2x2) 251-272
hypothetical surface reconstruction 252, 253
method 254-258
model
barrier and applied voltage 259
sample 258
tip 258
results
negative bias voltage 262-265, 269
positive bias voltage 265-266, 270
tip-sample distances: barrier height effect 260-261
tip-sample interactions 267-270
surface contribution to 252, 254
Self-assembled monolayers (SAM)
charge transfer through 365-368
at electrode metal surface 336-369
kinetics of process in 350-364
deterministic behavior in 359-362
multiple transients in 362-364
nucleation and growth mechanism in 353-356
rate measurements in 351-352
stochastic behavior in 356-359

(Self-assembled monolayers)
organic adsorption at electrified interface 338-340
2D phase transitions in 339-340
interfacial tension in 338
thermodynamics of 2D condensation in 340-350
on molecular structure of surfactant 344-346
nature of metal and 347-350
solvent influence on 346
stability of condensed phases 341-343
theoretical descriptions 343-344
STEM (Scanning Transition Electron Microscopy). See Surface plasmon excitation by STEM electrons
Stress effects in thin films 2-34
buckling of free surface 33
equilibrium strain for 32-33
examples of 30-34
for (111)fcc surfaces 32, 33-34
interface, 16-23. See also Interface stress in thin films
intrinsic
film thickness in 27
tensile 27-28
thermal 25-26
strains and elastic modulus variations 23-25
surface 2-16. See also Surface stress in thin films
surface reconstruction, clean metal surfaces 30-34
continuum model 31, 32-33
one-dimensional model 30-31
two-dimensional 31-32
thermodynamics of epitaxy 28-30
transformation in 33
Superlattices
AlAs 214-215
GaAs 211, 212, 213-215
semi-infinite:Kronig-Penney-type model
density of state studies of 225-230
formalism 226-227
numerical results 227-229
surface-state energy expression 219-223

(Superlattices...surface-state)
in nth mini-gap 221
wave functions in 220-221
Surface and interface spectroscopy
data taking strategy, formal considerations
information content 287-290
simultaneous energy and lateral distributions 287
FELIPE measurement of heterojunction band discontinuities 283-287
free-electron laser in 283, 284
lateral resolution in space MAXIMUM 276-283
photoemission spectromicroscopy on cleaved GaAs(110) surface 276-291
core-level peak shifts on surface 277
in homogeneous data from 276, 277, 278
MAXIMUM spectromicroscpe, lateral resolution 276
Schottky barrier formation inhomogeneities 279-282
Surface plasmon excitation
by STEM electrons 187-198
correction to bulk energy loss 193-194
energy loss probability in self energy formalism 191-193
normal modes 196-198
spatial resolution in energy loss spectroscopy 188-191
sphere coupled to planar surface 194-196
Surface stress in thin films 2-16
equilibrium of small solid crystal with surrounding fluid 8-10
thermodynamic derivations from 9-10
experimental measurements of 14-16
Lagrangian coordinate system in 6-8
physical origins of
2-body interatomic force model 6
contraction of surface layer in, 6
interior of solid and 5-6
theoretical calculations 10-14
inert gas crystals 11
ionic solids 14, 15
metals 11-13
semiconductors 13-14
thermodynamics of 2-5
in elastic and plastic deformation 5
in fluids 5
reversible work per unit area in 2-3
surface free energy and 3-4

Two-photon photoemission spectra 177-185. See also Photoemission, two-photon
on alkali metal overlayers 185-186
on clean metal surfaces 180-182
on noble metal overlayers Ag/Pd(111) 182-184

SEND FOR A FREE SAMPLE COPY OF ...

SCIENCE IN CHINA (SCIENTIA SINICA) Series A and B

Published on behalf of Academia Sinica

Chairman of the Editorial Committee: **Yan Dongsheng**, *Academia Sinica, Beijing, People's Republic of China*

(00794)
Subscription Rate 1994: Volume 37 (24 issues) **£ 525.00 (US$810.00)**

Audience: Mathematicians, Physicists, Astronomists, Material Engineers, Computer Scientists, Chemists, Biologists, Agriculturalists, Medical Researchers and Clinicians, Earth Scientists.

AIMS AND SCOPE
Science in China is the most widely read scientific research journal in China and is recognised as the primary publication medium by China's leading scientists ensuring that only papers of the highest standard and quality are published. *Science in China* is published in two parts; Series A covers mathematics, physics, astronomy, and technological sciences. Series B publishes papers on chemistry, life sciences and earth sciences. The journal is now available in English enabling scientists outside China to be kept aware of the most significant research taking place within China today.

A Selection of Papers
XIE YOU-QING, MA LIU-YING, ZHANG XIAO-DONG, ZOU PING, ZHAO LI-YING (PRC), Microstructure and properties of Cu-Ni alloys.
HU ZHI-ZHONG, CAO SHU-ZHEN (PRC), Theoretical study of fatigue limit for crack.
QIAN JIAN (PRC), A new method of determining eddy transport coefficients of turbulence.
LONG RUI-LIN, ZHU XUE-XIAN (PRC), L^2boundedness of some singular integral operators on product domains.
GONG SHENG (PRC), **C.H. FITZGERALD** (USA), The schwarzian derivative in several complex variables.
NI YUN-QI, WANG WAN-QIU, YUAN CHONG-GUANG, ZHANG QIN (PRC), Numerican study for the role playing of atmospheric dynamic processes caused by seasonal and non-seasonal forcings in formation of the short-term anomalous climate change.
TANG CHAO-SHU, SU JING-YI, LI ZHAO-PING, ZHANG LING-ZHI, YANG JUN, QI MING, LIU FU-AN, TANK JIAN (PRC), Possibility of targeting treatment for ischemic heart disease with liposome (I).
YIN WEN-YING, XUE LU-ZHENG (PRC), Comparative spermatology of protura and its significance on proturan systematics.
HU CHAO-HONG, ZOU CHENG-LU (PRC), Effect of native disulfide bonds on the denaturation of proteins in 6 mol/L guanidinium chloride.
HUO KE-KE, YU LAN-LAN, CHEN XIN-JIE, LI YU-YANG (PRC), A stable vector for high-level expression and secretion of human interferon αA in yeast.

Indexed/Abstracted in: *Chemical Abstracts Service*

Pergamon

Pergamon is an imprint of Elsevier Science.
Sterling price quoted applies worldwide except in The Americas.
US dollar price quoted applies in The Americas only.
Prices include postage and insurance. Customers resident in the EC will be charged VAT (or the equivalent) at their own country's rate, unless a VAT (or equivalent) registration number is supplied. Pergamon's VAT registration number in the UK is: GB 490 6384 25 000.

Please send me a **FREE SAMPLE COPY** of **SCIENCE IN CHINA (SCIENTIA SINICA) Series A and B (00794)**

Name _____ Position _____

Organisation _____ Department _____

Address _____

_____ Post/Zip Code _____

Return to: Elsevier Science Ltd, The Boulevard, Langford Lane, Kidlington, Oxford OX5 1GB, UK
or Elsevier Science Inc., 660 White Plains Road, Tarrytown, NY 10591-5153, USA

IHA4

SEND FOR A FREE SAMPLE COPY OF ...

ACTA METALLURGICA ET MATERIALIA

Published on behalf of Acta Metallurgica, Inc.

Editor: **Michael F. Ashby, FRS**, *University Engineering Laboratories, University of Cambridge, Trumpington Street, Cambridge CB2 1PZ, UK*

(00221)
1994: Volume 42 (12 issues) Subscription price: **£560.00 (US$865.00)**
ISSN 0956-7151

Audience: Materials Scientists, Metallurgists.

AIMS AND SCOPE
Acta Metallurgica et Materialia publishes original papers and occasional critical reviews which advance the understanding of properties of materials: metals and alloys, ceramics, high polymers and glasses. Emphasis is placed on those aspects of the science of materials that are concerned with the relationship between the structure of solids and their properties (mechanical, chemical, electrical, magnetic and optical); the thermodynamics, kinetics and mechanisms of processes occurring within solids; experiments and models which help in understanding the macroscopic properties of materials in terms of microscopic mechanisms; and with original work which advances the understanding of engineering materials.

A Selection of Papers
P.H. LEO, H.-J. JOU (USA), Shape evolution of an initially circular precipitate growing by diffusion in an applied stress field.
J. LU, J.A. SZPUNAR (Canada), Molecular-dynamics simulation of rapid solidification of aluminum.
D.M. ELZEY, H.N.G. WADLEY (USA), Modeling the densification of metal matrix composite monotape.
M.H. OH, H. INUI, M. MISAKI, M. YAMAGUCHI (Japan), Environmental effects on the room temperature ductility of polysynthetically twinned (PST) crystals of TiAl.
M. HILLERT, L. HÖGLUND, J. ÅGREN (Sweden), Escape of carbon from ferrite plates in austenite.
D.A.W. KAUTE, H.R. SHERCLIFF, M.F. ASHBY (UK), Delamination, fibre bridging and toughness of ceramic matrix composites.
H. LI, T.K. CHAKI (USA), Hydrogen embrittlement in ductile Ni_3Al—effects of hydrogen content, strain rate and pre-deformation.
J. NOORDHUIS, J.TH.M. DE HOSSON (The Netherlands), Microstructure and mechanical properties of a laser treated Al alloy.
M. KAJIHARA, M. KIKUCHI (Japan), Numerical analysis of dissolution of α phase in $\gamma/\alpha/\gamma$ diffusion couples of the Fe-Cr-Ni system.

Indexed/Abstracted in: *Current Contents, Chemical Abstracts, Engng Ind Monthly & Author Index, INSPEC, PASCAL-CNRS Database, Appl Mech Rev, Cam Sci Abstr, Metals Abstr, Materials Science Citation Index*

Pergamon

Pergamon is an imprint of Elsevier Science.
Sterling price quoted applies worldwide except in The Americas.
US dollar price quoted applies in The Americas only.
Prices include postage and insurance. Customers resident in the EU will be charged VAT (or the equivalent) at their own country's rate, unless a VAT (or equivalent) registration number is supplied. Elsevier Science VAT registration number in the UK: GB 490 6384 25 000.

Please send me a **FREE SAMPLE COPY** of **ACTA METALLURGICA ET MATERIALIA** (00221)

Name _____ Position _____

Organisation _____ Department _____

Address _____

_____ Post/Zip Code _____

Return to: Elsevier Science Ltd, The Boulevard, Langford Lane, Kidlington, Oxford OX5 1GB, UK
or Elsevier Science Inc., 660 White Plains Road, Tarrytown, NY 10591-5153, USA

IHA4

SEND FOR A FREE SAMPLE COPY OF ...

INTERNATIONAL JOURNAL OF SOLIDS AND STRUCTURES

Editor-in-Chief: **Charles Steele**, *Division of Applied Mechanics, Stanford University, Stanford, CA 94305, USA*
Consulting Editor and Editor-in-Chief 1965-1985: **George Herrmann**, *Division of Applied Mechanics, Stanford University, Stanford, CA 94305, USA*

(00297)
1994: Volume 31 (24 issues) Associated Personal price: **£185.00 (US$285.00)**
Subscription price: **£1323.00 (US$2035.00)**
ISSN 0020-7683

Audience: Mechanical and Civil Engineers, Materials Scientists.

AIMS AND SCOPE
The *International Journal of Solids and Structures* has as its objective the publication and dissemination of original research in mechanics of solids and structures as a field of applied science and engineering. It fosters the exchange of ideas among workers in different parts of the world and also among workers who emphasize different aspects of the foundations and applications of the field. The field of mechanics of solids and structures is experiencing considerable growth as a result of recent technological advances. The journal, by providing an international medium of communication, is encouraging this growth by encompassing all aspects of the field from the more classical problems of structural analysis to mechanics of solids continually interacting with other media, and including fracture, flow, wave propagation, heat transfer, thermal effects in solids, optimum design methods, model analysis, structural topology and numerical techniques. Interest extends to both inorganic and organic solids and structures.

A Selection of Papers
A.C. WIJEYEWICKREMA, L.M. KEER (USA), Matrix cracking in a fiber-reinforced composite with slip at the fiber-matrix interface.
Z. RYCHTER (Poland), Generalized displacements and the accuracy of classical plate theory.
YOSHIHIRO TOMITA, KENICHI HAYASHI (Japan), Thermo-elasto-viscoplastic deformation of polymeric bars under tension.
X. HUANG, B.L. KARIHALOO, W.B. FRASER (Australia), Contribution of first-order moduli differences to dilatant transformation toughening.
T.C.T. TING, D.M. BARNETT (USA), Image force on line dislocations in anisotropic elastic half-spaces with a fixed boundary.
W.J. STRONGE, T.G.ZHANG (UK), Warping of prismatic bars in torsion.
A.L. GOLDENVEIZER, J.D. KAPLUNOV, E.V. NOLDE (Russia), On Timoshenko-Reissner type theories of plates and shells.
CHENG LIU, ARES J. ROSAKIS, L.B. FREUND (USA), The interpretation of optical caustics in the presence of dynamic non-uniform crack-tip motion histories: a study based on a higher order transient crack-tip expansion.
D. BIGONI, E. RADI (Italy), Mode I crack propagation in elastic-plastic pressure-sensitive materials.
B. STORÅKERS, K.-F. NILSSON (Sweden), Imperfection sensitivity at delamination buckling and growth.

Indexed/Abstracted in: *Appl Mech Rev, Curr Cont ASCA, Cam Sci Abstr, Curr Cont/Eng Tech & Appl Sci, Eng Ind, INSPEC Data, Int Civil Eng Abstr, Math R, Mechanics, PASCAL-CNRS Data, Curr Cont Sci Cit Ind, Curr Cont SCISEARCH Data, SSSA/CISA/ECA/ISMEC, Materials Science Citation Index*

Pergamon

Pergamon is an imprint of Elsevier Science.
Sterling price quoted applies worldwide except in The Americas.
US dollar price quoted applies in The Americas only.
Prices include postage and insurance. Customers resident in the EU will be charged VAT (or the equivalent) at their own country's rate, unless a VAT (or equivalent) registration number is supplied. Elsevier Science VAT registration number in the UK: GB 490 6384 25 000.

Please send me a **FREE SAMPLE COPY** of **INTERNATIONAL JOURNAL OF SOLIDS AND STRUCTURES** (00297)

Name _____ Position _____

Organisation _____ Department _____

Address _____

_____ Post/Zip Code _____

Return to: Elsevier Science Ltd, The Boulevard, Langford Lane, Kidlington, Oxford OX5 1GB, UK
or Elsevier Science Inc., 660 White Plains Road, Tarrytown, NY 10591-5153, USA

IHA4

SEND FOR A FREE SAMPLE COPY OF ...

PROGRESS IN MATERIALS SCIENCE

An International Review Journal

Editors: **J.W. Christian**, *Department of Materials, University of Oxford, Oxford OX1 3PH, UK* and **T.B. Massalski**, *Department of Metallurgical Engineering & Materials Science, Carnegie-Mellon University, Pittsburgh, PA 15213, USA*
Associate Editors: **B. Cantor**, *Oxford, UK*, **T. Egami**, *Philadelphia, USA* and **G. Martin**, *Gif sur Yvette, France*

(00414)
1994: Volume 38 (5 issues) Associated Personal price: **£77.00 (US$119.00)**
Subscription price: **£316.00 (US$485.00)**
ISSN 0079-6425

Audience: Materials Scientists.

Progress in Materials Science publishes authoritative reviews of recent advances in the science of materials, with emphasis on the fundamental aspects of the subject, including thermodynamics, the atomistic and electronic nature of solids, and the use of materials in engineering. Particular emphasis is devoted to topics dealing with the chemical, mechanical or physical properties of metallic or non-metallic materials, ceramics and polymers.

A Selection of Papers
C.W. NAN (PRC), Physics of inhomogeneous inorganic materials.
S. MAHAJAN (USA), Growth- and processing-induced defects in semiconductors.
M. RÜHLE (Germany), **A.G. EVANS** (USA), High toughness ceramics and ceramic compounds.
H. GLEITER (Germany), Nanocrystalline materials.
M. YAMAGUCHI, Y. UMAKOSHI (Japan), The deformation behaviour of intermetallic superlattice compounds.
N.N. THADHANI (USA), Shock-induced chemical reactions and synthesis of materials.

Indexed/Abstracted in: *Current Contents, Chemical Abstracts, Engng Ind Monthly & Author Index, INSPEC, Materials Science Citation Index*

Pergamon

Pergamon is an imprint of Elsevier Science.
Sterling price quoted applies worldwide except in The Americas.
US dollar price quoted applies in The Americas only.
Prices include postage and insurance. Customers resident in the EU will be charged VAT (or the equivalent) at their own country's rate, unless a VAT (or equivalent) registration number is supplied. Elsevier Science VAT registration number in the UK: GB 490 6384 25 000.

Please send me a **FREE SAMPLE COPY** of **PROGRESS IN MATERIALS SCIENCE** (00414)

Name _____ Position _____

Organisation _____ Department _____

Address _____

_____ Post/Zip Code _____

Return to: Elsevier Science Ltd, The Boulevard, Langford Lane, Kidlington, Oxford OX5 1GB, UK
or Elsevier Science Inc., 660 White Plains Road, Tarrytown, NY 10591-5153, USA

IHA4